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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/688,225

10/16/2003

Dirk Henf

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23872

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08/17/2004

MCGLEW & TUTTLE, PC
1 SCARBOROUGH STATION PLAZA
SCARBOROUGH, NY 10510-0827

EXAMINER

FITZGERALD, JOHN P

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 08/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/688,225

Applicant(s)

HENF ET AL.

Examiner

John P Fitzgerald

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9,10 and 12-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,10 and 12-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. In view of Applicant's amendment filed 27 July 2004, rejections under 35 U.S.C. § 112, first and second paragraph are withdrawn. Acknowledgement is made of the cancellation of claims 8 and 11, the addition of claims 13-22 and the amendments made to the instant specification.

Response to Arguments

2. Applicant's arguments with respect to claims 1-7, 9, 10 and 12 have been considered but are moot in view of the new ground(s) of rejection. New ground(s) of rejection are made by the Examiner due to the Applicant's amendment of the instant specification effectively overcoming previously rejected claims under 35 U.S.C. § 112, first and second paragraphs, now that the Examiner has a full understanding of the instant invention.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 6, 7 and 22 are rejected under 35 U.S.C. § 102(b) as being anticipated by US 3,972,327 to Ernst et al. Ernst et al. disclose a process for testing a respirator product (Figs. 1-9) including a respiration gas source (a pressure generator or a central supply system (Ernst. et al.:

Art Unit: 2856

col. 2, lines 25-26) note: a fan is a pressure generator and thus an equivalent structural element); a suction conduit (4, 7, 8) and a pressure conduit (1, 3) connected to the gas source; connecting the fan to the respirator product (11) via a reversing valve (2, 5) to provide flow connection of one of the suction conduit and the pressure conduit with the respirator product via a line section (6, 10) in a predetermined time sequence while the other of the suction conduit and the pressure conduit is open toward the environment (7); variably throttling the cross-sectional area between the gas source and the respirator product to a preset sinusoidal (Fig. 9) breathing pattern (as recited in claim 7) and wherein the throttling sets the cross sectional area to a plurality of set points between fully opened and fully closed via a control device (27) (as recited in claim 22) (Ernst et al.: col. 3, line 65 to col. 4, line 28).

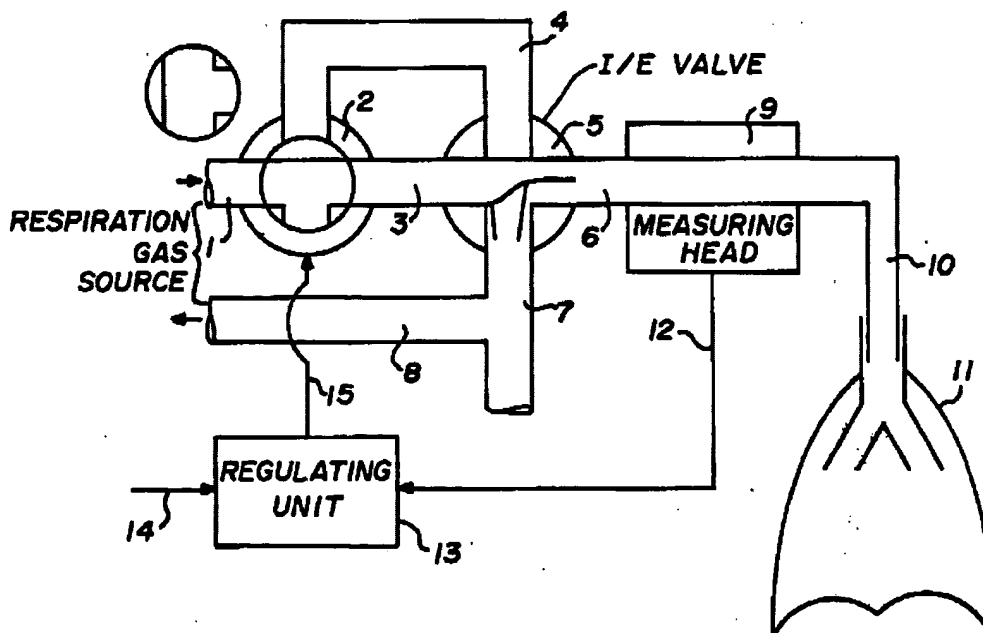


FIG. 1 Ernst et al.

5. Claims 9, 10 and 12-21 are rejected under 35 U.S.C. § 102(b) as being anticipated by US 3,972,327 to Ernst et al. Ernst et al. disclose a testing system for a breathing mask (Figs. 1-9)

Art Unit: 2856

having a respiration gas source (a pressure generator or a central supply system (Ernst. et al.: col. 2, lines 25-26) note: a fan is a pressure generator and thus an equivalent structural element) having a suction conduit (4, 7, 8) and a pressure conduit (1, 3); a line section (6, 10) having a test end connected to the breathing mask (11) and also having a valve end; a valve selectively connecting a flow of one of the pressure and suction conduits to the valve end of the line section; a throttling element arranged in the valve (as recited in claim 17) and arranged between the gas source and the test end of the line section the throttling element having a variable cross-sectional area to vary a flow of gas between the gas source and the test end of the line section; wherein the valve comprises a reversing valve (2, 5) with a valve housing with to valve inlets connected selectively to the suction and pressure conduits, and a valve outlet leading to the breathing mask the reversing valve including a flow channel that connects one of the valve inlets to the valve outlet as well as one of the valve inlets to a ventilation channel , the valve flow channel being rotatably movable between the inlets (see Fig. 1 and Fig. 3) (Ernst et al.: col. 3, lines 4-40) (as recited in claim 9); wherein the throttling element varies the cross-sectional area corresponding to a manipulated variable (control signals from a control device/unit (27)); the variable cross-sectional area occurs based on a degree of overlap between the cross-sectional area of one the valve inlets with the cross-sectional area of the flow channel wherein the valve element receives the manipulated variable being a signal curve alternately rising/declining proportionally (as recited in claim 12) (Fig. 9) controlling an angle of rotation position in relation to the valve housing (Ernst et al.: col. 3, line 65 to col. 4, line 28), thus controlling/forming (as recited in claim 18) the throttling element to increase/decrease the flow of gas to the test end over a period (as recited in claim 19) substantially similar to a breathing pattern of a user of the breathing mask

Art Unit: 2856

(as recited in claim 14); the control unit having "curve generators" (103, 104) to control the throttling element to a plurality of different pressure curves (including a sinusoidal pressure curve (Fig. 9) (as recited in claims 15, 20 and 21); a testing head (9) connected to the test end of the line section being connectable to the breath mask for detecting leakage (as recited in claim 16).

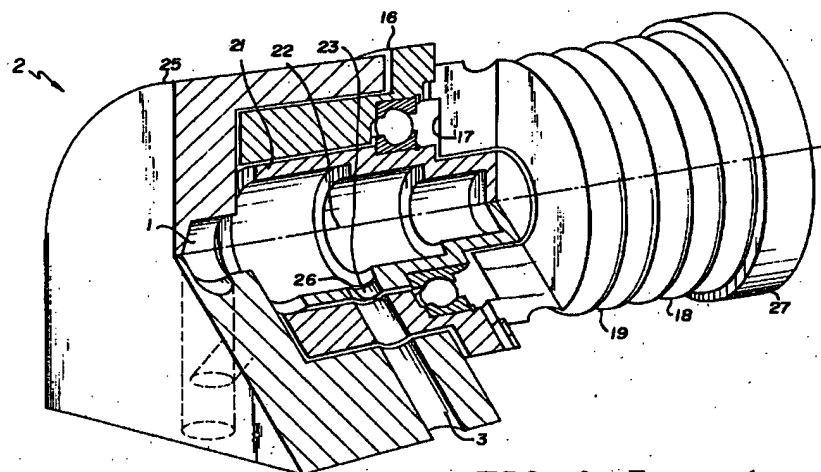


FIG. 3 Ernst et al.

Claim Rejections - 35 USC § 103

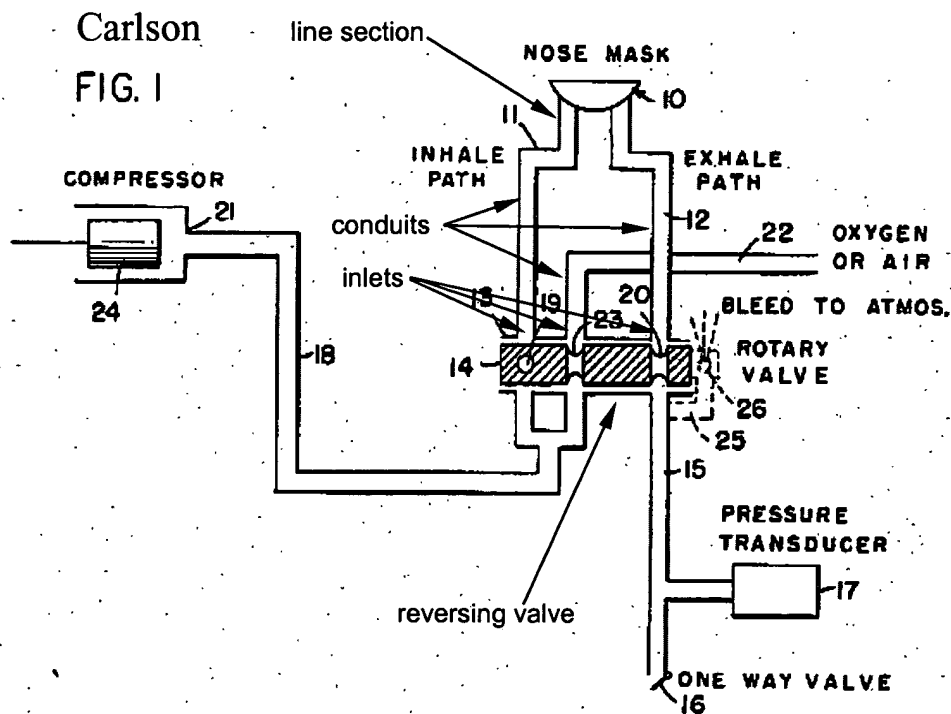
6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
7. Claims 1-5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US 3,357,428 to Carlson and US 4,344,144 to Damico et al. Carlson discloses a device for testing a respirator product (Figs. 1 and 2) having a compressor (note: a compressor, a tank of compressed gas, a pump are all obvious variants of a fan for providing a positive pressure source/gradient capable of inducing flow within associated conduits, and is considered a design choice well within the purview of one of ordinary skill in the art); a suction conduit (11) and a pressure

Art Unit: 2856

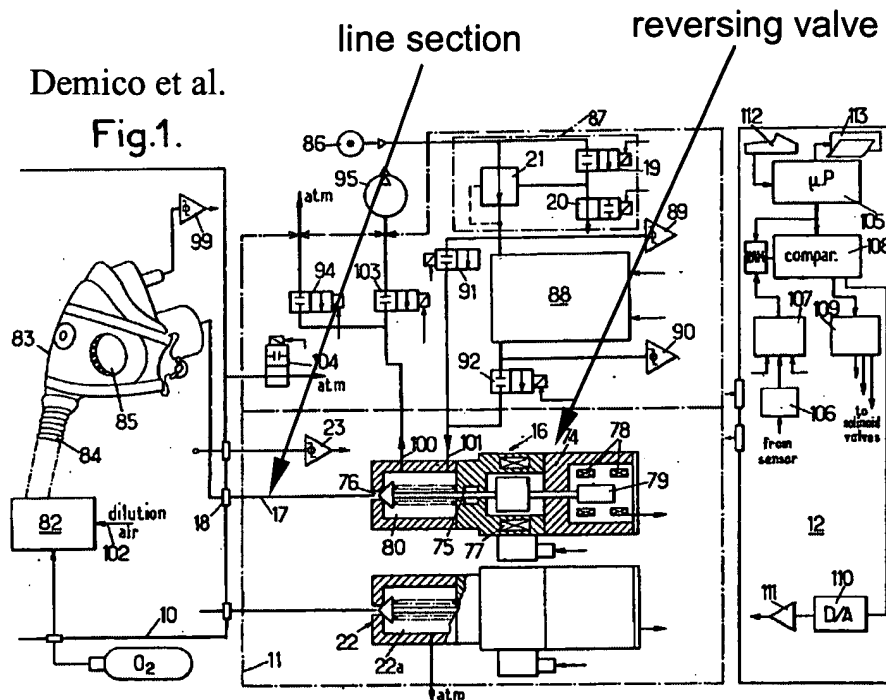
conduit (12) both connected to the compressor; a line section (see Fig. 1) connected to the respirator product; a reversing valve (13) connecting the compressor to the pressure and suction conduits to control flow to the respirator product via the line section in a predetermined time sequence (via a trigger (28) which energizes clutch motors (32, 37) (as recited in claim 4)) thus variably connecting the pressure conduit and the suction conduit to the open environment (16, 25, 26) in an open position; a throttling element (20, 23) (i.e. 'throttling' of the fluid flow due to change in the cross-sectional area as a rotating valve element (spool) (14) of the rotating valve is turned or varied according to a preset manipulated variable (73) (see Fig. 2) connected to the line section between the fan and the respirator product (as recited in claim 1); wherein the reversing valve comprises a valve housing with a valve element (14) swinging in a rotatingly movable manner therein between two end positions, having two valve inlets connected to the suction and pressure conduits and a valve inlets and outlets creating ventilation and flow channels (as recited in claim 2); wherein the preset manipulated variable has a signal curve alternately rising or declining proportionally (Carlson: col. 5, lines 31-43). Carlson does not expressly disclose a device for testing a respirator product further including a control unit setting the cross sectional area to a plurality of set points between fully opened and fully closed according to the manipulated variable (as recited in claim 1); and wherein the variable cross-sectional area of the throttling element is formed by the degree of overlap between the cross-sectional area of one of the valve inlets with the cross-sectional area of the flow channel wherein the valve element receives as the manipulated variable an angle of rotation position in relation to the valve housing (as recited in claim 3). Damico et al. teach an apparatus for creating gas flow cycles for a respirator product (83) (Figs. 1 and 2) having a pressure source (pump pressurized gas source) a

Art Unit: 2856

reversing valve (75) for providing throttling passage/element formed of a needle, as well as other types of elements such as a spool; an electrically actuatable means (77), either an electromagnet or a step-by-step motor, for controlling the position of the throttling member (Damico et al.: col. 2, lines 36-45) thus altering/varying the cross-sectional flow area as a function of the cycle to be simulated by a control unit (12) through an A/D converter (106), in accordance with a time variation curve (sine-shaped cycles, step-by-step pressure or flow variations or Watt's diagram) previously stored in the control unit (12) (Damico et al.: col. 4, lines 9-50). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the control unit and all of its elements and functions, as taught by Damico et al., thus modifying the device for testing a respirator product disclosed by Carlson, thus providing a capability of reproducing a wide variety of operating/respiratory cycles to be simulated for testing respirator products (Damico et al.: col. 1, lines 6-54).



Art Unit: 2856



Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2856

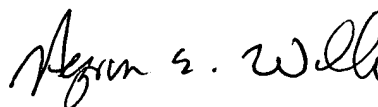
however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Fitzgerald whose telephone number is (571) 272-2843. The examiner can normally be reached on Monday-Friday from 7:00 AM to 3:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams, can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JF

08/11/2004



HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800